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Chapter III: CIRCULATION & ACCESSIBILITY ELEMENT

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Chapter III
CIRCULATION & ACCESSIBILITY

3.1 INTRODUCTION

The Circulation & Accessibility Element is one of the seven mandated elements of the General Plan. The Element contains goals, policies and recommended actions founded on the results of technical analysis and legal requirements. It is intended to guide the development of the City's circulation system in a manner that is compatible with the Land Use Element, and has direct relationships to other elements of the General Plan.

While its focus is a system capable of responding to the transportation needs of the land use plan, the Circulation & Accessibility Element also addresses the role of the City of South Pasadena in a regional context and the means by which the local circulation system can support and interact with regional travel demand.

3.1A Purpose of The Element

The purpose of the Circulation & Accessibility Element of the General Plan is to state the specific goals, policies, and plans to improve the operations of city-wide transportation facilities and service through the year 2010. Perhaps most importantly, the Circulation & Accessibility Element presents the City's goals and policies for attaining the circulation system which best promotes a safe, efficient and reliable movement of goods and people throughout the City of South Pasadena.

The Circulation & Accessibility Element of the General Plan demonstrates the relationship between the Land Use Plan and all other elements. This is because the Circulation & Accessibility Element is more than a transportation plan, it is actually an infrastructure plan that concerns itself with the circulation of people, goods, energy, water, sewage, storm drainage, and communications. In turn, the Land Use Element reflects the community's circulation system in terms of pedestrian-oriented and auto-oriented planning proposals for that system.

The implementation of the proposed improvements of the Circulation & Accessibility Element will enhance the development and maintenance of a transportation system which will maximize freedom of pedestrian and vehicular movement and which balances concerns for mobility, safety, and quality in the City's living environment.

Various provisions of the Circulation & Accessibility Element address efforts to coordinate city transportation improvements with improvements to the regional transportation network. In addition, the Circulation & Accessibility Element discusses the need for coordination between the various regional transportation agencies including the California Department of Transportation (CALTRANS), the Los Angeles County Metropolitan Transit Authority (MTA), the South Coast Air Quality Management District (SCAQMD), and adjoining municipal jurisdictions and the County of Los Angeles.

3.2 EXISTING CONDITIONS

The City of South Pasadena is served by roadways as shown on Figure III-1.

The existing network is largely a grid system of north/south and east/west roads. The primary north/south roadways include Garfield, Fair Oaks, Fremont, Meridian, Orange Grove, and Grand. Key east/west streets are Huntington, Monterey, and Mission. The exception to the grid system is the southwest quadrant of the City that has curvilinear streets developed to fit the topography of the area.

From a regional transportation perspective, South Pasadena lies at the crossroads of a number of regional transportation facilities. Regional facilities that traverse South Pasadena include the Pasadena Freeway (SR 110), Huntington Drive (regional arterial), Monterey Road (regional arterial), and Fair Oaks Avenue (regional arterial). Although Fremont Avenue is used as a regional facility, it is not designed as an arterial corridor. Fremont Avenue traverses through a predominantly residential neighborhood and extends border to border within the City of South Pasadena. Orange Grove Avenue from the 110 Freeway to Columbia Street (Pasadena border) can be used as a linkage between the 110 and the 210/134 Freeways. Other street facilities within South Pasadena are largely developed to serve adjacent land uses and allow for transport of people and goods within the City. A number of the local streets may be used for regional trip making purposes, but their primary purpose is to serve local needs.

3.2A Roadway Classifications

The following section describes the geometric and operational characteristics defined for freeways, arterial streets, collector streets, and local residential streets. The descriptions are generally grouped by facility type and include the number of lanes and average daily traffic volume. When the classification of a street is not clearly determined, that the lower classification level should be maintained. Classifications should be made such that mobility corridors remain open.

- **Freeways**

Freeways generally provide inter-regional access. Their primary function is to move vehicles between cities. Freeways contain anywhere from 8 to 12 lanes with recommended design volumes from 65,000 to 300,000 depending on geometric designs that permit high travel speeds.

- **Arterial Streets**

Arterial streets are generally the commercial arteries. They carry the majority of traffic within the city. A major arterial would contain either four or six lanes of through traffic, plus left-turn lanes at key intersections. Minor arterials serve the same function as major arterials, but have four lanes of through traffic and may or may not have separate left-turn lanes. Recommended design volumes on arterials are generally greater than 25,000 for major arterials and between 4,000 and 30,000 for minor arterials, depending on number of lanes and left-turn movements.

Arterials serve two primary functions: to move vehicles within the city and to serve adjacent commercial land uses. Driveways and other curb cuts along arterials are generally limited to minimize disruption to traffic flow. In particular, the City will encourage a reduction in the number of curb cuts along Fair Oaks Avenue.

- **Collector Streets**

Collector streets are intended to carry traffic between residential neighborhoods and the arterial street network. They are generally two and four-lane roadways that have a mixture of residential and commercial land uses along them. Average daily traffic volumes on collector streets are generally between 2,000 and 6,000. Higher density residential land uses or side yards of single-family homes may be located adjacent to collector streets. Higher traffic volumes may be acceptable on certain collector streets such as those fronting commercial uses.

- **Local Residential Streets**

Local residential streets are designed to serve adjacent residential land uses only. They allow access to residential driveways and often provide parking for the neighborhood. They are not intended to serve through traffic. Traffic volumes on a residential street should not exceed about 2,500 vehicles per day and 200-300 vehicles per hour. The maximum residential traffic volume which is acceptable to persons living along a street may vary from one street to another, depending upon roadway width, type of dwelling units (i.e., high density apartments versus single-family homes), presence of schools and other factors. The maximum volume of 2,500 is, therefore, to be used as a guide only. Key components of the South Pasadena roadway network are classified by type in Table III-1.

Table III-1 City of South Pasadena Roadway Classifications		
Facility Type	Roadway Segment	From – To
Freeways	Pasadena Freeway (SR-110)	West city limit to north city limit
Major Arterials	Huntington Drive	South city limit to Atlantic Boulevard
	Fair Oaks Avenue	North city limit to Huntington Drive
	Atlantic Boulevard	Garfield Avenue to Pine Street
Minor Arterials	Mission Street	Pasadena Avenue to east city limit
	Pasadena Avenue	West city limit to Mission Street
	Monterey Road	West city limit to east city limit
	Orange Grove Avenue	North city limit to Mission Street
	Fremont Avenue	North city limit to south city limit
	Garfield Avenue	Clark Street to Atlantic Boulevard
	Grevelia Street	Fair Oaks Avenue to Clark Street
	Clark Street	Stratford Avenue to Garfield Avenue
Collectors	El Centro Street	Pasadena Avenue to Brent Avenue
	Oak Street	Meridian Avenue to Garfield Avenue
	Pine Street	Huntington Drive to Atlantic Boulevard
	Grand Avenue	North city limit to Mission Street
	Via Del Rey	Monterey Road to Camino Verde
	Oliver Street	Orange Grove Avenue to Meridian Avenue
	Meridian Avenue	Oliver Street to south city limit
	Marengo Avenue	Mission Street to south city limit
	Collis Avenue	West city limit to Hill Drive
	Fletcher Avenue	Alhambra Road to Huntington Drive
	Arroyo Drive	North city limit to Pasadena Avenue
	Camino Del Sol	Via Del Rey to St. Albans
	Hill Drive	St. Albans to west city limit
	Flores de Oro	Via Del Rey to Camino Lindo
	Camino Lindo	Flores de Oro to Alpha Avenue
	Alpha Avenue	Camino Lindo to south city limit
	Indiana Avenue	Monterey Road to Alta Vista
	Brunswick Avenue	Monterey Road to St. Albans
	St. Albans	Brunswick Avenue to Hanscom Drive
	Mission Street	Arroyo Drive to Pasadena Avenue
	San Pascual	West city limit to north city limit
	Orange Grove Avenue	Mission Street to Monterey Road
Local (Residential) Streets	All roadways and roadway segments not listed above.	

Figure III-1 - Circulation System: South Pasadena

NOTE: The Meridian Variation is shown on the plan for informational purposes only.

The City of South Pasadena has taken the official possition that the Route 710 Freeway Extension through the Meridian Variation would have serious and unacceptable impacts on the City, and that the proposed route is diametrically opposed to the principals outlined within this Element. In lieu of the freeway extension, the City is willing to cooperate with Federal State and local authorities to define a low build alternative that would use existing transportation corridors and make certain improvements to increase their efficiency.

- **Proposed Route 710 Freeway Extension**

The City has consistently and unanimously opposed a second freeway for over 45 years and this position is reinforced by Proposition G-G, passed decisively by the voters of South Pasadena in November, 1986, and Resolution 6473 passed May 21, 1997.

3.2B Roadway Capacity, Level of Service and Environmental Capacity

- **Roadway Capacity**

Roadway traffic operation is generally evaluated by estimating the ratio of existing daily traffic volumes to the daily roadway capacity. Capacity is measured in terms of the ability of the street system to meet and serve the demands placed on it. It is generally considered the most practical measure of how well the mobility needs of the City are being met.

Average daily capacity is considered as the maximum number of vehicles that pass over a segment of roadway in 24 hours. Average daily capacity volumes are typically derived by assuming that peak hour volumes comprise between 8-10% of the total average daily capacity volumes. Whereas roadway classification defines primarily the function of a roadway, roadway capacity is more a function of the actual geometry of the roadway and its ability to carry traffic. Capacity is affected by a number of factors including roadway type, street and lane widths, the number of travel lanes, the number of crossing roadways, signal cycle length, the absence or presence of on-street parking, the number of driveways, pavement conditions and roadway design. Level of Service C volumes are used to define the desirable volumes as the evaluation criteria for this study, as shown below.

Table III-2 presents the recommended maximum desirable service volumes of various roadway configurations for different levels of service.

Table III-2
City Of South Pasadena Daily Roadway Capacity Values

	Maximum Average Daily Volumes by Level of Service					
Type of Roadway	A	B	C	D	E	F
6 Lanes (Divided)	33,900	39,400	45,000	50,600	56,300	
4 Lanes (Divided)	22,500	26,300	30,000	33,800	37,500	
4 Lanes (Undivided)	15,000	17,500	20,000	22,500	25,000	
2 Lanes (Divided)	10,000	11,700	13,300	15,000	16,600	
2 Lanes (Undivided)	7,500	8,800	10,000	11,300	12,500	
Local Road	3,000	3,500	4,000	4,500	12,500	

Table III-3
City Of South Pasadena
Existing Roadway Volume-To-Capacity

Roadway	Location	Capacity[1]	Daily Volume	Volume to Capacity Ratio
Grevelia Street	e/o Marengo Avenue	10000	8400	0.84
Mission Street	w/o Prospect Avenue w/o Park Avenue	30000 30000	15000 9400	0.50 0.31
Pasadena Avenue	w/o Arroyo Drive s/o Mission Street	30000 30000	20000 6600	0.67 0.22
Monterey Road	@ Brunswick Avenue @ Glendon Way @ Brent Avenue	30000 30000 10000	8200 22600 10100	0.27 0.75 1.01
Oak Street	e/o Fremont Avenue @ Milan Avenue	10000 10000	2400 3700	0.24 0.37
Huntington Drive	w/o Fair Oaks Avenue e/o Fair Oaks Avenue w/o Marengo Avenue e/o Marengo Avenue w/o Fletcher Avenue e/o Fletcher Avenue	45000 45000 45000 45000 45000 45000	30500[3] 38200[3] 32500[3] 29000[3] 29600[3] 30000[3]	0.68 0.85 0.72 0.64 0.66 0.67
Arroyo Drive	n/o Mission Street	10000	3500	0.35
Grand Avenue	@ Pasadena Freeway	10000	3000	0.30
Orange Grove Avenue	s/o Columbia Street @ Magnolia Street	30000 30000	30400 11300	1.01 0.38
Fremont Street	n/o Monterey Road s/o Spruce Street s/o Beech Street	13300 13300 20000	17300 19100 24200	1.30 1.44 1.21
Fair Oaks Avenue	n/o State Street s/o Lyndon Street n/o Huntington Drive	30000 30000 30000	32200 31000 29000[3]	1.07 1.03 0.97
Marengo Avenue	s/o Mission Street n/o Huntington Drive s/o Hunting Drive	10000 10000 10000	3400 4700[3] 6100[3]	0.34 0.47 0.61
Garfield Avenue	s/o Grevelia Street @ Oak Street	9400 30000	3000 13300	0.31 0.44

[1] Capacity represents level of service C traffic flow conditions
[2] Data not available
[3] ADT estimated using PM peak hour volumes assumed as 8 percent of total ADT.

Table III-3 lists the volume-to-capacity (V/C) ratios along arterial and collector roadway segments. Volume-to-capacity ratios less than 1.00 indicate that the roadway has unused capacity and generally operates satisfactorily throughout the day and acceptably during the peak hour. A volume-to-capacity ratio greater than 1.00 (actual daily volumes exceed the roadway's design capacity) is an indication that the roadway likely experiences undesired congestion during peak hours and possibly during other periods of the day.

- **Environmental Capacity**

The environmental capacity of a street will be used as a measurement to gauge the impact of the level of service (LOS) of a street on its surroundings. This concept follows a new approach to street design and improvements which is based on the following conditions:

1. The traffic volume of a street;
2. The speed of traffic on a street;
3. The number of trucks on a street (on designated truck routes);
4. The parking conditions of a street;
5. The land uses of the street environment.[1]

These conditions will be reviewed as improvements are undertaken by the City and should be used as criteria in considering street and sidewalk widening and other street improvements. Interaction with bicycle and pedestrian activities will also be considered the environmental capacity of a street. The purpose of the environmental capacity standard is to incorporate the preexisting environments that will be considered during land use development decision making and local street improvements.

- **Street Closures**

The closure of segments of the public right-of-way are sometimes required in order to re-direct the balance of traffic and not impact sensitive neighborhoods. The closures occur within the boundaries of the public right-of-way and must be approved by the City Council. As traffic volumes change due to shifting land use patterns and regional travel routes, street closures should be periodically reviewed as to their need and effectiveness.

3.2C Truck Routes

Truck routes are an important element of a city's transportation system since they direct heavy truck traffic onto arterial and collector facilities, providing necessary access to commercial and industrial areas, while limiting or prohibiting access to local or residential streets. Designated routes help to control noise and air pollution in residential areas and protects local streets from significant surface damage which is likely to result from heavy truck traffic and vehicle weights far in excess of those considered for roadway design.

An adopted system of designated truck routes exists within the City of South Pasadena and includes the following roadways:

- Pasadena Avenue (West city limits to Mission Street)
- Mission Street (Pasadena Avenue to Fair Oaks Avenue)
- Fair Oaks Avenue (North city limits to Huntington Drive)

[1] City of Pasadena, General Plan, 1992, Mobility Element, Page 26.

- Huntington Drive (South city limits to Garfield Avenue)
- Fremont Avenue (Huntington Drive to South city limits)

Signage indicating designated truck routes is located at city entrances, points of connection with other designated truck routes, and ramps to the Pasadena Freeway.

The South Pasadena Municipal Code currently contains provisions for vehicles transporting hazardous materials into and through the City along the truck route system (thereby protecting the safety of the community). Further, SPMC Section 19.20-21 establishes thresholds for trucks transporting loads in excess of 4,000 pounds into and through the City and for trucks transporting loads in excess of 6,000 pounds on the Pasadena Freeway.

While the designated system of routes adequately serves the needs of the City, the gross maximum weight restriction (6,000 pounds) in South Pasadena is consistent with the weight limit imposed by most cities for non-truck route streets. Streets selected for a truck route system should be designed to support loads in excess of this limitation; possible future revisions may therefore be appropriate.

3.2D Congestion Management Program (CMP)

The Congestion Management Program (CMP) was a part of Proposition 111 passed by California voters in 1990. Proposition 111 authorized a nine (9) cent per gallon gas tax increase which produces $80 million annually for Los Angeles County. It was supported by the environmental community as an approach to allocate new funding for transportation strategies that improve air quality and keep pace with new development. The CMP was created for the following purposes:

- To link land use, transportation, and air quality decisions.
- To develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel.
- To propose transportation projects that are eligible to compete for State gas tax funds.

Los Angeles County is required to develop an annual CMP integrating individual CMP's for each of the cities within the County; South Pasadena is required to develop an annual CMP for incorporation into the County's plan. CMP conformance is required annually in order for the City to continue receiving state gas tax funds and to preserve the City's eligibility for other state and federal transportation dollars.

The intersection at Fremont Avenue and Huntington Drive is the only roadway within the City of South Pasadena that is currently listed on the Congestion Management Plan Highway and Roadway System (CMPHRS). Fremont has been included in the Los Angeles County CMPHRS as a "Principal Arterial". In addition, the intersection of Fremont Avenue/Huntington Drive within the City has been identified as a CMPHRS traffic volume monitoring intersection.

Similar to the Fair Oaks Avenue signal synchronization which links the South Pasadena portion of Fair Oaks with the portion in Pasadena using the traffic control center in Pasadena, an effort to make streets smarter by implementing new technologies to enhance the mobility and circulation of pedestrian, bicycle, and vehicular movement throughout the city will be undertaken.

3.3 ALTERNATIVE MODES OF TRAVEL

The automobile has traditionally been the primary method of transportation in the southern California region. However, changing lifestyles, economic pressures and greater social and environmental concerns have increased the need for alternatives to automobile travel. Public transportation is one of the alternative modes of travel that can possibly reduce the region's and the City's dependence on the present auto-oriented transportation system.

In order for a transit system to attract users away from the automobile, it must be as convenient and affordable as possible. Compared to the convenience, flexibility and privacy of travel by car, transit travel is perceived to be less appealing, especially for recreational purposes. Thus, for transit service to provide a viable alternative to the automobile in the City of South Pasadena, the City must take an active role in planning, promoting, and supporting provision of various transit opportunities.

Both fixed route bus transit service and paratransit service operate within the City of South Pasadena. Fixed route transit services are typically bus lines that operate on regular schedules along a set route, stopping at predefined bus stops. Fixed route service can be either local (intracity) or regional (intercity). Paratransit services, more commonly referred to as Dial-a-Ride, are demand responsive services that provide rides to passengers on an individual request basis. Although they operate within a defined service area, they do not operate on fixed routes or schedules. Paratransit service typically serve the transit-dependent such as elderly and persons with disability. They often serve major destinations such as hospitals and medical facilities but may also take passengers to local destinations such as neighborhood shopping centers.

3.3A Fixed Route Buses

Public bus transit service is provided to the City of South Pasadena by the Los Angeles Metropolitan Transportation Authority (LACMTA) on local service routes 79/379 and 176, and express routes 483 and 485. All of the fixed route transit lines that service South Pasadena are intercity buses which originate and terminate outside the city limits. The City of South Pasadena will undergo a transit restructuring program to improve the efficiency of the existing bus service system. The City will consider other transit service operators such as the Foothill Transit or other community based transit to provide services to its local residents.

A city wide community based transit system is the long-term goal of South Pasadena. The vision is to provide safe, reliable, and affordable alternative transportation choices that afford residents the opportunity to access places, without using the automobile. Connections will be made to the proposed Blue Line stations in South Pasadena. The following paragraphs describe the services provided by each MTA line.

- **Route 483/485**

Express transit service between South Pasadena and the central business district of Los Angeles is provided by Route 483 (LA-Altadena via Fair Oaks Avenue Express Line) and Route 485 (LA-Altadena via Lake Avenue Express). Route 483 originates in Altadena and travels south through Pasadena and into South Pasadena. Route 485 originates in Altadena, travels south through Pasadena, then west into South Pasadena. Both routes continue through Alhambra to the San Bernardino Freeway (I-10) where they continue uninterrupted into California State University of Los Angeles and then further west into central Los Angeles. A "park-and-ride" lot is available at the War Memorial east of Fair Oaks Avenue northwest of the Pasadena Freeway. The lot provides direct access to Route 485. The park-and-ride lot is also available to non-transit users who carpool.

- **Route 79/379**

Route 79, also known as the LA-Arcadia-via Huntington Drive Line, is an east-west line which operates along the Huntington Drive/Mission Road arterial through Arcadia, unincorporated Los Angeles County, San Marino,

South Pasadena, and the Los Angeles communities of El Sereno and Lincoln Park, into the central business district of Los Angeles.

- **Route 176**

The Glassell Park-Highland Park-Alhambra-El Monte Line is an east-west line that provides local service to the cities of El Monte, Rosemead, San Gabriel, Alhambra, South Pasadena, and northeastern Los Angeles.

- **Route 401/402**

The Los Angeles to Pasadena Line originates at Venice/Olive in Downtown Los Angeles and continues uninterrupted north on the Pasadena Freeway (11) to Arroyo Parkway to Colorado Blvd. At this point, Line 401 travels east on Colorado, turning north on Allen Avenue, and terminating at NewYork. Line 402 travels west on Colorado to Pasadena Avenue, terminating at a park-and-ride facility at Union and Walnut.

3.3B Paratransit Service

Demand responsive transit service is provided by South Pasadena Senior Ride. This Dial-A-Ride service provides transportation for local trips and medical appointments primarily to senior citizens, although service is available to persons with disability. This service is limited to the area within the South Pasadena city limits with the exception of direct service into Pasadena and to Huntington Memorial Hospital and the associated medical facilities immediately adjacent to the hospital. Users must be a resident of South Pasadena and either 55 years or older or disabled. Hours of operation are Monday through Friday from 8:00 AM to 4:00 PM.

3.3C Rail Transit

Rail transit service is currently being reestablished in Southern California after a hiatus of thirty years. The 400-mile Metro Rail Plan proposed by the Los Angeles County Metropolitan Transit Authority (LACMTA) entails the development of rail service in multiple corridors throughout the urbanized area of the County. Presently operating, beyond MetroLink Commuter Rail Service, is the Metro Blue Line serving twenty-two (22) stations between downtown Los Angeles and downtown Long Beach, the Metro Green Line serving fourteen (14) stations between City of Norwalk and El Segundo, and the initial segment of the Metro Red Line, serving eight (8) stations from Union Station in downtown Los Angeles west to Wilshire/Western, which ultimately will be extended to North Hollywood. Transfers between the Metro Blue, Green and Red Lines, Amtrak and the Regional MetroLink Rail components of the system would be provided at Union Station.

A northwesterly extension of the Metro Blue Line has begun construction, to run from Union Station in downtown Los Angeles along the former Atchison, Topeka & Santa Fe railroad right-of-way through South Pasadena to a terminus in east Pasadena. The Pasadena Light Rail System is proposed to start service in the future. As currently planned, the line will have stops in Chinatown, Avenue 26, French Avenue, South West Museum, Avenue 57, Mission Street, Fillmore, Del Mar Boulevard, Memorial Park, Lake Avenue, Allen Avenue and Sierra Madre Villa Avenue. The City strongly supports grade separation of the proposed Blue Line from city streets.

The Mission and Meridian platform of the Blue Line will provide South Pasadena with direct rail transit service. The service will attract commuters and visitors away from the automobile and thus, positively impact the roadway and freeway systems within the City. Projected impacts and usage of the Metro Blue Line service included in the draft Environmental Impact Report prepared by the LACMTA, were incorporated into the analysis and development of the Circulation & Accessibility Element.

To ensure that the planned light rail line is integrated into the City's circulation system, and City activities, consideration of the rail line should be incorporated into all aspects of City Planning activities and the development review process. This is particularly important in the vicinity of the Mission Street station. In addition, the pedestrian circulation system must be designed to allow convenient walking access to the station.

3.3D Park-and-Ride

"Park and ride" facilities provide an interface between the private automobile or bicycles, and public transit/mass transit. Park-and-ride facilities enable the public to access the transit system by driving or bicycling to a park-and-ride facility, parking the car or bicycle, then riding the transit system to complete the trip. The City should make sure that the "park and ride" facilities do not turn the City of South Pasadena into a parking lot for Pasadena and downtown Los Angeles.

The City has an established "park and ride" facility at the War Memorial west of Fair Oaks and north of the Pasadena Freeway for MTA Bus Route 485.

3.3E Bicycle Facilities

The bicycle is increasing in popularity as a mode of transportation for commuter travel as well as for recreation. This is due to the growing cost of motor vehicle operation, the significantly shorter portal-to-portal time when bikes are used on short trips, the increasing awareness and desire of travelers to utilize clean-air travel methods, and the acceptance of the bicycle for personal health, exercise, and increased mobility. There is a need to meet the growing demand for safe places to ride bicycles, for both recreation and commuter activities.

For many years, roadway facilities have been built exclusively to meet the needs of the motorized vehicle, resulting in street geometrics, lane widths, and intersections that have not been designed for bicyclist concerns. Bicycle safety is jeopardized due to bike/auto and bike/pedestrian confrontation on the street, and the lack of space given over to bicycle movement. Conflicts between bicycles and pedestrians at intersections and on sidewalks result in the need to separate these three modes, wherever possible to provide a safer and more efficient operational environment for each.

The following definitions describe the classifications of bike routes in the City, consistent with Caltrans definitions for bikeway facilities statewide.

Bicycle Path - Class I: This facility is a special path for exclusive use of bicycles that is separated from the motor vehicle traffic by space or a physical barrier.

Bicycle Lane - Class II: A bicycle facility where a portion of the paved area is marked especially as a lane for use of bicycles. It is identified by BIKE LANE signing, pavement marking and lane line markings. Usually, special ordinances are necessary to legally define the area's exclusive use of bicycle traffic and to exclude mopeds and infringement by motor vehicles.

Bicycle Route - Class III: A bicycle way designated within a public right-of-way. The purpose of the bike route is primarily that of transportation, allowing the bicyclist to travel from one point in the City to another. A "shared bicycle route" is a street identified as a bicycle facility by BIKE ROUTE signing only. No special markings on the pavement are provided.

The City of South Pasadena has appointed a committee to explore developing a Bikeway Master Plan and Map. Implementation of any bicycle route facility would be subject to applicable design standards and guidelines. The State of California has prepared and approved Standards and Guidelines for the Implementation and Design of Bicycle Facilities. The evolution of design concepts for this mode of transportation continue today, but the basic conclusions and basis for design remain with the State Guidelines.

3.4 FUTURE CONDITIONS

The City of South Pasadena is a built-out community with a land use pattern established at the turn of the century. Major changes in local land use are not foreseen. The General Plan will preserve community identity.

Changes to travel demands and traffic patterns on the South Pasadena circulation system will result from two principal causes: (1) growth in traffic from adjacent cities, and (2) minor changes in local land uses.

3.4A Regional Tripmaking

Regional tripmaking is responsible for much of the travel demand for the street system in South Pasadena and is caused by traffic passing through South Pasadena from the residential areas north and east of the City to employment centers to the south and west, primarily in downtown Los Angeles. Recent Caltrans studies indicate there will be little improvement to the local street system if the Route 710 Freeway is constructed. Congestion patterns move around the local system, mixing local and regional traffic much as it occurs today. Clearly, regional travel has a greater impact on traffic and is responsible for existing aggravated traffic conditions within South Pasadena, not land uses within South Pasadena.

Similarly, according to the Pasadena-Los Angeles Light Rail Transit Project Draft Environmental Impact Report, construction of the proposed light rail route through South Pasadena is estimated to result in removal of 2,500 to 4,600 vehicle trips from the street system in the peak hours. This could equate to as many as 20,000 to 38,000 vehicles on a daily basis, using a commonly accepted ratio for peak hour to daily travel. This again provides some quantitative indication of the amount of regional travel demand placed upon the local streets of South Pasadena.

The proposed route 710 Freeway extension and the Pasadena Light Rail Transit project provides stark comparisons towards addressing future traffic conditions. Inasmuch as construction of a major freeway extension produces untenable environmental conditions, alternative means such as rail transit can satisfy the regional travel demand while positively influencing the urban environment. Further efforts are necessary to increase rail transit usage and further decrease regional travel on the street system.

In general, urban communities have squarely faced the challenge of traffic congestion and have largely determined that greater use must be made of existing transportation resources. To address growth in regional tripmaking, this Circulation & Accessibility Element is focused upon:

- Prioritizing the existing street network, and promoting a Multi-Mode/Low-Build concept;
- Encouraging and fostering development of light rail, commuter rail, and other fixed-guideway transit systems;
- Facilitating aggressive transportation system and transportation demand management (TSM/TDM) techniques; and
- Calming traffic in residential areas.

3.4B Local Land Use

The Land Use Element of the General Plan indicates that there are six primary categories of land use within the City of South Pasadena. While new structures may replace older ones or adaptive reuse may occur, the intensity of the new use will be similar from a traffic and access perspective. Nevertheless, the land use and local circulation system will be mutually supportive to reflect changes that occur over time in the City.

The exception to the above statement involves special Focus Areas that have been targeted in the Land Use and Economic Revitalization Elements for particular attention. The Focus Areas define development potential that is more specific in intent than the underlying land use designations. The intent is to provide insight on how the underlying use should be interpreted when actual development proposals are being considered. A Focus Area may provide for mixing of uses, residential intensification, theme implementation, greater intensity or increased flexibility in use as appropriate to each situation.

For purposes of identifying future conditions and the appropriate response by the Circulation & Accessibility Element, each Focus Area presents general traffic and access implications. These implications then tend to dictate if changes are necessary for the local circulation system to serve the future needs of the potential Focus Areas. The Focus Areas considered include:

- Huntington-Garfield
- Fair Oaks Terminus @ Huntington Drive
- Fair Oaks Corridor (Central, Upper and Lower Fair Oaks)
- Raymond Hill
- Fremont Corridor
- Mission Street Specific Plan Area
- Ostrich Farm
- Arroyo Annexation

3.4C Master Plan of Streets

Combining the issues identified for regional tripmaking and for local land use creates a basis for establishing how the circulation system (in particular the street network) must evolve in the framework of the General Plan. The following basic tenets apply:

- The current street network as shown in Figure III-1 will remain essentially intact. Major additions or deletions in the future are not foreseen.

- Classification of existing streets as shown on Table III-1 will remain unchanged in context and intent.

- Existing arterials will be monitored and studied to determine how capacity can be increased and how congestion, delay, and associated environmental impacts can be reduced. Capacity and operational improvements could include, but are not limited to, signal timing and system upgrades; revised lane configurations; minor intersection improvements such as new turn lanes and bus turn-outs; parking restrictions or removal; traffic calming techniques; and elimination of conflicts such as multiple driveways.

- The environmental capacity standard (pg. III-7) will be used to determine the appropriate roadway capacity and its potential impact on the quality of life factors for area residents. This standard will measure the impact of vehicular interaction with the surrounding environs (such as pedestrian, bicycle, and transit services) and will be considered in land use development and street improvement endeavors.

3.4D Transportation System & Transportation Demand Management

Transportation System Management (TSM) and Transportation Demand Management (TDM) techniques are cost-effective methods of improving traffic conditions. Roadway system expansion alone will not be enough to serve all projected circulation needs within the City of South Pasadena. TSM and TDM techniques will have to be incorporated as an integral part of the City's package of transportation services provided in the future.

- **Transportation System Management (TSM)**

Transportation System Management (TSM) techniques are generally low cost methods relative to capital improvements. They involve changes to the existing system that permit improvements in operation. Caltrans defines TSM projects as "those projects designed to increase the number of person trips which can be carried on the system without significantly increasing the design capacity or the number of through lanes."

- **Transportation Demand Management (TDM)**

Transportation Demand Management (TDM) generally refers to policies and programs that increase the use of high occupancy vehicles (transit, carpooling, and vanpooling), bicycling and walking, shortening trips, and avoiding trips altogether (telecommuting). TDM techniques can be an effective tool in reducing air pollution as well as traffic congestion. In addition, the California Congestion Management Program, passed by the voters as Proposition 111, requires that each jurisdiction implement a TDM program. The City will develop a program that encourages and assists all the businesses in South Pasadena to plan and maintain TDM programs.

3.4E Truck Routing

Maintenance of an appropriate truck routing system necessitates the ongoing determination of the impact of truck traffic on abutting land uses. There are land use categories that benefit from heavy truck access. Among these are commercial uses that require streets and alleys proximate to their development. Commercial land uses also require access to trucks primarily for the transfer of inventory. As land uses adjust over time, the City must select proper truck routes and deal appropriately with the issue of truck traffic. Coordination with neighboring communities' truck routes is required.

Conversely, there is a need to protect those land uses that are adversely affected by heavy truck traffic. Heavy truck traffic within residential neighborhoods produces annoying and often excessive levels of noise, fumes, vibrations and unsightliness. Areas in which schools, hospitals, churches, convalescent homes, and mortuaries are located must also be considered.

3.5 ISSUES

The South Pasadena community faces challenges in achieving the principal circulation goal of its Vision Statement: To provide for convenient and efficient mobility within the City, while reducing reliance on the automobile as the principal means of travel.

South Pasadena, like other cities, is not an island unto itself: circulation issues and travel patterns extend far beyond city limits. The circulation system within the City of South Pasadena is heavily impacted by regional travel demands as well as land use, circulation, and development plans of other jurisdictions. Bottlenecks have developed at key locations, including Fair Oaks Avenue at the Pasadena Freeway. Existing public transit service is poor in the community, with few bus routes and long increments of time between buses. Local bike lanes are non-existent and the west San Gabriel Valley is lacking any coordinated regional bikeway system.

3.5A Prioritize Improvements to the Circulation System

Improvements made to the existing street network will be coordinated with transit, bike, and pedestrian needs.

3.5B Development and Maintenance of an Efficient Vehicular Circulation System

The regulations for land use and transportation must be mutually supportive if the changes desired in transportation choices are to be realized. This will require modifications to the City's land use planning densities, zoning designations, urban design criteria, and parking controls to support these mobility goals.

Principal transportation corridors within the City are defined and established. These are necessary for the movement of residents within the City, for residents to travel out of the City to other communities; and for non-residents to travel into South Pasadena for work, retail, commercial and recreational reasons. Principal transportation corridors will carry transit vehicles, bicycles, pedestrians and auto traffic, rather than being principal streets for autos only.

Trips that pass through South Pasadena, or that have one end outside of the City, should be managed and controlled, so that they travel on designated routes and do not infiltrate residential neighborhoods. The key strategy of control is to provide incentives for the use of desired routes and disincentives to travel on streets where high volumes are inappropriate.

3.5C Encourage the Use of Alternative Modes of Transportation

In order to meet the basic General Plan principal of making South Pasadena a City where people without cars can circulate, the first priority of the Circulation & Accessibility Element is to increase the availability and use of community based transit.

To respond to these challenges will require a variety of new policies, incentives and services that affect both transportation and future development in South Pasadena. In addition, South Pasadena needs to evaluate the regional services available and capitalize on the availability of other systems where possible.

The pedestrian is an integral part of the circulation system and requires appropriate attention in the Circulation & Accessibility Element. The sidewalk is an area of refuge that represents a convenient and safe route for pedestrian travel. The high percentage of residential population in South Pasadena, coupled with mid-day walkers for shopping trips and jogging, necessitate the establishment of a pedestrian circulation system that will support and encourage walking as a mode of transportation. The City embraces a policy direction to make South Pasadena a place where bicycling and walking are encouraged and fostered, and where safety, education and facilities are provided as an ongoing part of transportation and recreational planning and programs.

3.5D Reduce the Level of Vehicular Trips in General, and Specifically the Use of Autos for Drive-Alone Trips

While allowing people to circulate without cars is a primary emphasis of the Circulation & Accessibility Element, another emphasis is getting people to share rides and reduce the number of vehicular trips. In order to accomplish this, the City will need to take specific actions that will assist people in finding ways to share a ride, give priority to vehicles with more than a single occupant, or even eliminate the need for the trip totally.

3.6 GOALS AND POLICIES

The following goals, policies and strategies were developed to address circulation and accessibility issues in the City:

GOAL 1: Provide convenient, efficient and safe mobility within the city.

Policies:

1.1: Seek innovative solutions to reduce adverse impacts of through traffic.

1.2: Manage traffic flow into designated corridors.

1.3: Encourage joint use, shared parking and off-peak demand to maximize the utilization of existing and proposed parking throughout the City.

1.4: Provide safe and efficient truck routes that minimize the impacts of truck traffic and efficiently service South Pasadena businesses.

1.5: Develop circulation system standards for roadway classifications, right-of-way width, design speed, capacity, maximum grades and associated features such as medians and bicycle lanes.

1.6: Establish and maintain a City-wide traffic count program to assure availability of data needed to monitor other policies and improvements.

1.7: Promote traffic signal coordination where feasible to lessen congestion, delay, and to enhance safety.

GOAL 2: Encourage a full range of circulation strategies for overall reduction in vehicle trips.

Policies:

2.1: Develop efficient city-wide local public transportation servicing all segments of the population.

2.2: Develop and promote increased use of alternative modes of transportation, including but not limited to: walking, bicycling, ridesharing, transit, telecommuting, paratransit, and shuttles.

2.3: Promote the reduction of drive-alone trips and vehicular trips generally.

2.4: Support the development of additional regional public (mass) transportation facilities and services.

2.5: Encourage the provision of preferential parking for high occupancy vehicles (HOV's).

2.6: Develop and promote community-based public transit.

GOAL 3: **Encourage regional coordination of transportation improvement.**

Policies:

3.1: Coordinate with applicable regional, state and federal agencies in the development of transportation improvements.

3.2: Work with adjacent cities to ensure that the traffic impacts of development projects in these cities do not adversely affect the City of South Pasadena.

3.3: Support the development of additional circulation routes through the City.

3.4: Coordinate parking strategies with neighboring cities.

GOAL 4: **Utilize effective land use planning to promote a balanced transportation system.**

Policies:

4.1: Require proposals for major new developments to mitigate or participate in mitigating traffic related impacts that they will cause.

4.2: Require developers to maximize the potential for transit use and other alternative modes of transportation by residents, employees and visitors.

4.3: Allow mixed-use zoning which includes housing, residential and commercial to encourage living, working, and shopping in the same area and the associated reduction of trips.

4.4: Encourage convenient access between affordable housing and affordable transportation.

4.5: Develop and maintain a road system that is based upon and balanced with the Land Use Element of the General Plan.

4.6: Require that new development submit a parking demand analysis to the City engineer for review and approval whenever a proposal is made to provide less than the full code requirement for parking for each individual land use on-site at the proposed development.

4.7: Maintain existing pedestrian facilitates and encourage new development to provide pedestrian walkways between developments.

GOAL 5: **Ensure a balance between parking supply and demand so that an adequate supply of parking is provided to meet the demands generated by the land use element.**

Policies:

5.1: Periodically review and update the Zoning Code to ensure that parking requirements accurately reflect the demand for parking generated by each land use within South Pasadena, conducting the review at least once every five years.

5.2: Require that all new and infill developments provide adequate parking to meet their parking demands on-site or in consolidated parking facilities within close proximity to their site.

5.3: Consider all concepts relating to joint use, shared parking and off-peak demand to maximize the utilization of existing and proposed parking throughout the City.

5.4: Ensure that an adequate supply of handicap parking spaces are provided in all new developments.

5.5: Enforce maximum parking requirements to promote alternative travel modes to driving.

5.6: Encourage landscaping and beautification of parking facilities.

3.7 STRATEGIES

Strategies for carrying out the policies associated with each goal presented in the previous section are identified:

POLICY 1: Provide convenient and efficient mobility within the city.

Strategies:

1.1: Adopt appropriate thresholds and performance standards for acceptable levels of service consistent with the Congestion Management Program(CMP) for non-CMP roadways.

1.2: Develop circulation system standards for roadway classifications, right-of-way width, design speed, capacity, maximum grades and associated features such as medians and bicycle lanes.

1.3: Establish and maintain a City-wide traffic count program to assure availability of data needed to monitor other policies and improvements.

1.4: Implement intersection capacity improvements where feasible and justified by traffic demands.

1.5: Implement traffic signal coordination where feasible to lessen congestion and delay.

1.6: Implement measures that discourage use of residential streets as alternate routes during peak travel periods.

1.7: Meet and monitor the local requirements of the Congestion Management Program (CMP) as outlined in the Los Angeles County Congestion Management Plan.

POLICY 2: Encourage a full range of transportation options throughout the city.

Strategies:

2.1: Encourage the implementation of employer Transportation Demand Management (TDM) requirements included in the Southern California Air Quality Management District's Regulations of the Air Quality Management Plan.

2.2: Promote development of additional park-and-ride lots via use of excess right-of-way, shared use arrangements, and/or new development opportunities.

2.3: Develop and implement the Master Plan of Bikeways over a multi-year timeframe.

2.4: Provide bicycle connections in the street network system to transit-oriented development, commercial areas and transit stops.

2.5: Foster use of and provision of bicycle storage and shower facilities to encourage use of bicycles for commuter trips.

2.6: Require that accessible and secure facilities for bicycle storage are provided in all new commercial developments, all areas of public use, at transit stops and in developments which include offices.

2.7: Create an environment which makes it easy and enjoyable to walk by implementing aesthetic programs, information/direction signage, improved pedestrian lighting, and safety aspects including ramps, non-slip surfaces and level walkways.

2.8: Participate in regional efforts to implement (TDM) requirements, which may include but are not limited to:

- Flexible work schedules to reduce demand during the peak commuting periods.
- Carpooling and vanpooling.
- Employer subsidized transit passes.
- Provision of bike storage areas and showers to encourage the use of bicycles for commuting.
- Telecommuting.

2.9: Assist the LACMTA in providing improved bus service by monitoring and encouraging the implementation of new and/or expanded bus service and access into the City's planning and development review activities.

POLICY 3: Encourage regional coordination of transportation improvement programs.

Strategies:

3.1: Devote proper local resources to assist the MTA in completing the Blue Line Light Rail project including formation of coalitions with surrounding communities to eliminate project delays and applying for grant funding for portions of the project in South Pasadena.

3.2: Strongly support the separation of the Pasadena Blue Line from city streets.

3.3: Encourage support for multi-modal low build.

3.4: Work with the MTA to obtain funding and develop state-of-the-art operational enhancements to improve arterial street capacity and progression.

3.5: Work with City of Pasadena on their Southwest Transportation Management Plan.

3.6: Evaluate a variety of TSM techniques and implement those that are deemed appropriate. Suggested TSM programs for consideration should include but are not limited to:

- Auxiliary lanes, such as acceleration and deceleration lanes.
- Intersection improvements including addition of turn lanes, channelization, and implementation of a signal coordination system.
- Restriction of peak hour parking
- Commuter Information Systems, such as changeable message signs, highway advisory radio, computer bulletin boards, telephone call-in systems, and related links with other city or state traffic operations centers.

POLICY 4: Utilize effective land use planning to promote a balanced transportation system.

Strategies:

4.1: Require where appropriate new development to fund or participate in funding of transit facilities, such as bus shelters and turn outs.

4.2: Promote development of additional park-and-ride lots via use of excess right-of-way, shared use arrangements, and/or new development opportunities.

4.3: Periodically review and update the Zoning Code to ensure that parking requirements accurately reflect the demand for parking generated by each land use within South Pasadena, conducting the review at least once every five years.

4.4: Require that new development submit a parking demand analysis to the City engineer for review and approval whenever a proposal is made to provide less than the full code requirement for parking for each individual land use on-site at the proposed development.

4.5: Maintain existing pedestrian facilitates and encourage new development to provide pedestrian walkways between developments.

4.6: The City should pay particular attention to the new ADA requirements while reviewing development proposals and permit applications.

POLICY 5: Ensure a balance between parking supply and demand so that an adequate supply of parking is provided to meet the demands generated by the land use element.

Strategies:

5.1: Require that new development submit a parking demand analysis to the City for review and approval whenever a proposal is made to provide less than the full code requirement for parking for each individual land use on-site at the proposed development.

5.2: Prepare a parking management plan to guide the expansion of the supply of public parking.

5.3: Coordinate parking strategies with neighboring cities.

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